

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method of dynamically re-allocating a frequency spectrum to a plurality of radio networks (~~RNs; 16~~) in accordance with a predefined spectrum allocation scheme, wherein a spectrum resource has previously been allocated to each RN (~~16~~) or group of RNs (~~16, 16'~~), comprising:

generating an electronic spectrum request for a RN (~~16~~) or a group of RNs (~~16, 16'~~); and

transmitting the electronic spectrum request via a communications network (~~18~~) to a server infrastructure (~~12~~) which also receives electronic spectrum requests for other RNs (~~16~~), the server infrastructure (~~12~~) processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to reallocate the spectrum resources to the plurality of RNs (~~16~~).

2. (Original) The method of claim 1, wherein the re-allocation is performed continuously or wherein the re-allocation is performed quasi-continuously.

3. (Currently Amended) The method of claim ~~1 or~~ 2, further comprising determining a service quality of one of the RNs (~~16~~) taking into account the actual or predicted traffic on the RN's (~~16~~) spectrum resource and generating the electronic spectrum request in dependence of the service quality.

4. (Currently Amended) The method of claim ~~one of claims 1 to 3~~, wherein the whole frequency spectrum is re-allocated.

5. (Currently Amended) The method of claim ~~one of claims 1 to 3~~, wherein only a portion of the frequency spectrum is re-allocated and wherein the portion

of the frequency spectrum to be re-allocated is taken from the individual RNs' ~~(16)~~ spectrum resources according to a predefined contribution scheme.

6. (Currently Amended) The method of claim ~~one of claims 1 to 5~~, wherein the spectrum allocation scheme is based on spectrum credits relating to elementary spectrum units.

7. (Currently Amended) The method of claim 6, wherein each RN ~~(16)~~ or group of RNs ~~(16, 16')~~ is assigned the same or an individual first number of spectrum credits and wherein an electronic spectrum request for an RN ~~(16)~~ comprises a specification of a second number of spectrum credits representative of the requested spectrum resource.

8. (Currently Amended) The method of claim ~~6 or~~ 7, wherein the communications network ~~(18)~~ allows to reassign the spectrum credits among the plurality of RNs ~~(16)~~.

9. (Currently Amended) The method of claim ~~one of claims 6 to 8~~, wherein the spectrum credits have a limited temporal validity.

10. (Currently Amended) The method of claim ~~one of claims 1 to 9~~, wherein the spectrum re-allocation scheme is auction-based and wherein the electronic spectrum requests comprise electronic bids submitted via the communications network ~~(18)~~.

11. (Currently Amended) The method of claim 10, wherein the electronic bids relate to one or more frequency bundles comprised within the frequency spectrum and wherein a specific frequency bundle is re-allocated to the RN ~~(16)~~ associated with the best electronic bid.

12. (Currently Amended) The method of claim 11, wherein, prior to the next re-allocation process for all RNs ~~(16)~~, the specific frequency bundle or a part thereof re-allocated to the RN ~~(16)~~ or group of RNs ~~(16, 16')~~ associated with the best electronic bid is allocated to another RN ~~(16)~~ or group of RNs ~~(16, 16')~~.

13. (Original) The method of claim 10, wherein the frequency spectrum to be re-allocated is partitioned bid-proportionally.

14. (Currently Amended) The method of claim ~~one of claims 10 to 13~~, wherein the electronic bids are submitted iteratively.

15. (Currently amended) A computer program product for dynamically re-allocating a frequency spectrum to a plurality of radio networks in accordance with a predefined spectrum allocation scheme, wherein a spectrum resource has previously been allocated to each RN or group of RNs, comprising program code portions for:
~~performing the steps of claims 1 to 14~~
generating an electronic spectrum request for a RN or a group of RNs and
transmitting the electronic spectrum request via a communications network to a server infrastructure which also receives electronic spectrum requests for other RNs, the server infrastructure processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to reallocate the spectrum resources to the plurality of RNs.

16. (Canceled)

17. (Currently Amended) A system for dynamically re-allocating a frequency spectrum to a plurality of radio networks ~~(RNs; 16)~~ in accordance with a predefined spectrum re-allocation scheme, wherein a spectrum resource has previously been allocated to each RN ~~(16)~~ or group of RNs ~~(16, 16')~~, comprising:

a communications network ~~(18)~~;

at least one RN infrastructure ~~(A, B, C, D)~~ with one or more RNs ~~(16, 16')~~, means ~~(14)~~ for generating an electronic spectrum request, and means ~~(14)~~ for transmitting the electronic spectrum request via the communications network; and

a server infrastructure ~~(12)~~ in communication via the communications network ~~(18)~~ with the at least one RN infrastructure ~~(A, B, C, D)~~, the server infrastructure ~~(12)~~ having means for receiving electronic spectrum requests and means for processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to re-allocate the spectrum resources to the plurality of RNs ~~(16)~~.

18. (Original) The system of claim 18, configured as an electronic auction network.

19. (Currently Amended) A server infrastructure ~~(12)~~ for dynamically re-allocating a frequency spectrum to a plurality of radio networks ~~(RNs; 16)~~ in accordance with a predefined spectrum re-allocation scheme, wherein a spectrum resource has previously been allocated to each RN ~~(16)~~ or group of RNs ~~(16)~~, comprising:

means for receiving electronic spectrum requests in communication via a communications network ~~(18)~~ with at least one RN infrastructure ~~(A, B, C, D)~~; and

means for processing the received electronic spectrum requests in accordance with the spectrum re-allocation scheme to re-allocate the spectrum resources to the plurality of RNs ~~(16)~~.

20. (Currently Amended) A radio network ~~(RN)~~ infrastructure ~~(A, B, C, D)~~ utilizing a previously allocated spectrum resource, comprising:

at least one RN ~~(16)~~; and

a device ~~(14)~~ for generating an electronic spectrum request and for transmitting the electronic spectrum request via a communications network ~~(18)~~ to a server infrastructure ~~(12)~~ which also receives electronic spectrum requests for other RNs ~~(16)~~, the server infrastructure ~~(12)~~ processing the received spectrum requests in accordance with a predefined spectrum re-allocation scheme to re-allocate a spectrum resources to the at least one RN ~~(12)~~.